

Department of Transportation Federal Aviation Administration

Supplemental Type Certificate

Number **ST01920SE***This certificate, issued to:***Aviation Partners Boeing
7299 Perimeter Road South
Seattle, WA 98108**

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part 25 of the Federal Aviation Regulations.

Original Product—Type Certificate Number: A1NM
Make: Boeing
Model: 767-300, 767-300F

Description of the Type Design Change: Installation of winglets, wing structural reinforcement and related system changes on Boeing Model 767-300 series airplanes. Fabrication and installation of parts must be accomplished in accordance with the FAA-approved Aviation Partners Boeing Master Drawing Lists as listed in the following attached Approved Model List (AML) documents (revision levels as stated or later FAA-approved revisions):

Model	Description	Approved Model List (AML) document #
767-300	Partial Wing Retrofit Installation (767-300-1 kit)	AP67.3-AML1920, Rev. IR, dated October 15, 2008, or later FAA approved revision.
767-300F	Partial Wing Retrofit Installation (767-300F-1 kit)	AP67.3F-AML1920, Issued July 8, 2009 or later FAA approved revision.
767-300	Winglet Installation (767-300-2 kit)	AP67.3-AML1920, amended January 22, 2009 or later FAA approved revision.
767-300F	Winglet Installation (767-300F-2 kit)	AP67.3F-AML1920, Issued July 8, 2009 or later FAA approved revision.

Limitations and Conditions: The limitations and conditions of Type Certificate A1NM apply except as outlined on Pages 3 through 8 of this STC. A copy of this certificate must be included in the permanent records of each airplane modified in accordance with this STC. Approval of this change in type design applies to the Boeing Model 767-300 and 767-300F series airplanes that are otherwise unmodified (unless identified as a previously determined compatible STC). This approval should not be extended to other airplanes of these models unless it is determined that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of the airplane.

(Limitations and Conditions continued on Page 3 of 8)

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: February 16, 2007

Date of issuance: October 15, 2008

Date reissued:

Date amended: January 22, 2009; July 08 2009



By direction of the Administrator

(Signature)

Manager, Seattle Aircraft Certification Office

(Title)

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This certificate may be transferred in accordance with FAR 21.47.

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Issued to: Aviation Partners Boeing
Date of Issuance: October 15, 2008
Date amended: January 22, 2009; July 08, 2009

Limitations and Conditions (continued):

Airspeed Limits: See Type Certificate Data Sheet A1NM for the 767-300-1 and 767-300F-1kits and the Airplane Flight Manual Supplement AP67.3-0601, latest FAA approved revision level for the 767-300-2 and 767-300F-2 kits.

C.G. Range: See Type Certificate Data Sheet A1NM for the 767-300-1 and 767-300F-1kits and the Airplane Flight Manual Supplement AP67.3-0601, latest FAA approved revision level for the 767-300-2 and 767-300F-2 kits.

Maximum Weights: See Type Certificate Data Sheet A1NM for the 767-300-1 and 767-300F-1kits and the Airplane Flight Manual Supplement AP67.3-0601, latest FAA approved revision level for the 767-300-2 and 767-300F-2 kits.

Eligible S / N's: Refer to the applicable Aviation Partners Boeing Approved Model List (AML) document referenced above for the applicable Eligible Airplane Serial Number document.

Operational Requirements: This engineering approval of a changed type certificate limitation does not permit a change in operating rule applicability to the operator of the changed aircraft. An applicant for an operating rule applicability change must obtain any change in operating rule applicability through consultation with their responsible certificate management office (CMO).

Airplane operation must be in accordance with the applicable Aviation Partners Boeing Airplane Flight Manual (AFM) Supplement, Configuration Deviation List (CDL) Supplement, and Weight and Balance Manual Supplement listed in the applicable Approved Model List (AML) document referenced above.

This modification may not be installed after August 30, 2010 unless (1) previously approved electrical wiring interconnection system (EWIS) instructions for continued airworthiness (ICA) have been evaluated and determined to be adequate for this installation by the FAA, or (2) revised EWIS ICA have been approved by the FAA Oversigned Office (Refer to § 26.11)

The 767-300-1/-2 and 767-300F-1/-2 installations are limited to 12 months, 2000 cycles or 3000 hours after kit installation, whichever comes first.

This modification is FAA approved for airplanes equipped with General Electric CF6-80C2 series engines and Pratt and Whitney PW 4000 series engines with no engine strut vibration isolators installed only.

This modification is FAA approved for 767-300F airplanes line numbers 1 through 663 which have had Service Bulletin 767-54-0081, Boeing Strut Improvement Program (SIP) only. (767-300F airplanes line number 664 and on should have the SIP installed in production.)

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Date amended: January 22, 2009; July 08, 2009

Limitations and Conditions (continued):

Flight Management Computer (FMC):

100K series FMC models are not permitted to be used with this STC.

200K series FMC models are only acceptable if the FMC Part Numbers are implemented per the applicable Boeing Service Bulletin for the engine combinations shown in the tables below.

200K FMCS	FMC Part #	Service Bulletin #
General Electric	S242T102-323	none
Engines	S242T102-324	767-34-0063
	S242T102-327	767-34-0075
	S242T102-329	767-34-0103
	S242T102-330	767-34-0211
	S242T102-331	767-34-0266
	S242T102-333	767-34A0393
	S242T102-420	none
200K FMCS	S242T102-223	767-34-0069
Pratt and Whitney	S242T102-224	767-34-0079
Engines	S242T102-225	767-34-0101
	S242T102-226	767-34-0222
	S242T102-227	767-34-0266
	S242T102-228	767-34-0301
	S242T102-420	none

700K series FMC models are only acceptable when the Flight Operations Service Bulletin TBW-3 is implemented (see APB Document AP67.3-0605, Supplement to the Flight Crew Operations Manual) or Service Bulletin 767-34-0555 is accomplished.

Certification Basis: Based on 14 CFR §§ 21.115, 21.19 and 21.101, and the FAA policy for significant changes in FAA Order 8110.48, and AIR-110 Policy Memo, dated October 29, 2004, the certification basis for the APB design for structural modification for provision and installation of winglets on Boeing Model 767-300 and 767-300F Series airplanes, is as follows:

- The type certification basis for Boeing Model 767-300 series airplanes is shown on Type Certificate Data Sheet (TCDS) A1NM for parts not changed or not affected by the change.
- For parts changed or affected by the design change, the certification basis is 14 CFR part 25, effective February 1, 1965, including the latest applicable requirements of Amendment 25-120, and 14 CFR part 26, effective December 14, 2007, including the latest applicable requirements of Amendment 26-1, since the reference date of application is February 16, 2007. Based on § 21.115 and § 21.101, and the FAA policy for significant changes in Order 8110.48, the certification basis for the APB design for provision and installation of the winglets was determined to be as follows:

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Certification Basis (continued):

Regulations at the latest amendment 25-0 through 25-120

Part/Paragraph	Part/Paragraph	Part/Paragraph	Part/Paragraph	Part/Paragraph	Part/Paragraph
25.1	25.207*	25.367	25.607	25.959*	25.1397*
25.3*	25.231*	25.371*	25.609	25.975*	25.1401*
25.21	25.233*	25.373*	25.611	25.979*	25.1403*
25.23	25.235*	25.391*	25.613	25.981**	25.1419*
25.25	25.237*	25.427*	25.619	25.1001*	25.1431*
25.27	25.251*	25.445*	25.621*	25.1011*	25.1443*
25.29	25.253*	25.457	25.623	25.1301	25.1501*
25.103*	25.255*	25.459*	26.625	25.1307*	25.1503*
25.107*	25.301	25.471	25.629	25.1309	25.1505*
25.111*	25.303	25.473	25.671	25.1316*	25.1507*
25.117*	25.305	25.479	25.672*	25.1321*	25.1513*
25.119*	25.307	25.481	25.675*	25.1322*	25.1519
25.121*	25.321*	25.483	25.685*	25.1337*	25.1529
25.123*	25.331*	25.485	25.697*	25.1351*	25.1535*
25.125*	25.333*	25.489	25.699*	25.1353*	25.1541*
25.143*	25.335*	25.491	25.703*	25.1355*	25.1553*
25.145*	25.337*	25.495	25.777*	25.1357*	25.1555*
25.147*	25.341*	25.503	25.779*	25.1363*	25.1581*
25.161*	25.343*	25.507	25.863	25.1385*	25.1583
25.171*	25.345*	25.509	25.869*	25.1387*	25.1585*
25.173*	25.349*	25.519	25.901*	25.1389*	25.1587*
25.175*	25.351*	25.581*	25.954	25.1391*	Appendix C*
25.177*	25.361*	25.601	25.955*	25.1393*	Appendix G
25.181*	25.363*	25.603		25.1395*	Appendix H
25.203*		25.605			Appendix K*

* Regulations that are Not Affected by the Modification for the -1 Kit only

** Original certification basis, Amendment 25-45 for Section 25.981 (a)(3) with respect to the lightning protection features of the fuel tank structural fasteners only. Other aspects of the STC comply with Amendment 25-102.

Regulations at an intermediate amendment

FAR	Amendment
25.149*	25-72

* Regulations that are Not Affected by the Modification for the -1 Kit only

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Certification Basis (continued):

Regulations at the amendment level in TCDS A1NM

FAR	Amendment	FAR	Amendment	FAR	Amendment
25.201	25-42	25.493	25-23	25.1329	25-0
25.365	25-0	25.571***	25-45		

***Amendment 25-86, is applied to Section 25.571 for modified wing structure or wing structure that is affected by the modification

The 14 CFR part 25 paragraphs which are not applicable to the modification are provided in the following table:

Not Applicable to the Modification

Part/Paragraph	Part/Paragraph	Part/Paragraph	Part/Paragraph	Part/Paragraph
25.2	25.751-25.755	25.937	25.1125	25.1161
25.31	25.875	25.945	25.1127	25.1192
25.33	25.904	25.1027	25.1147	25.1399
25.497	25.905	25.1101	25.1149	App E
25.521-25.537	25.907	25.1103	25.1153	App I
25.573	25.925	25.1105	25.1157	
25.737	25.929	25.1107	25.1159	

The 14 CFR part 25 paragraphs which are not affected by the modification are provided in the following table:

Not Affected by the Modification

Part/Paragraph	Part/Paragraph	Part/Paragraph	Part/Paragraph	Part/Paragraph	Part/Paragraph	Part/Paragraph
25.101	25.683	25.809	25.939	25.1043	25.1303	25.1453
25.105	25.689	25.810	25.941	25.1045	25.1305	25.1455
25.109	25.693	25.811	25.943	25.1091	25.1323	25.1457
25.113	25.701	25.812	25.951	25.1093	25.1325	25.1459
25.115	25.721	25.813	25.952	25.1121	25.1326	25.1461
25.393	25.723	25.815	25.953	25.1123	25.1327	25.1511
25.395	25.725	25.817	25.957	25.1141	25.1331	25.1515
25.397	25.727	25.819	25.961	25.1142	25.1333	25.1516
25.399	25.729	25.831	25.963	25.1143	25.1335	25.1517

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Certification Basis (continued):

Not Affected by the Modification

Part/ Paragraph h	Part/ Paragraph h	Part/ Paragraph h	Part/ Paragraph h	Part/ Paragraph h	Part/ Paragraph h	Part/ Paragraph h
25.405	25.731	25.832	25.965	25.1145	25.1381	25.1522
25.407	25.733	25.833	25.967	25.1155	25.1383	25.1523
25.409	25.735	25.841	25.969	25.1163	25.1411	25.1525
25.415	25.771	25.843	25.977	25.1165	25.1413	25.1527
25.477	25.772	25.851	25.991	25.1167	25.1415	25.1531
25.487	25.773	25.853	25.993	25.1181	25.1421	25.1533
25.499	25.775	25.854	25.994	25.1182	25.1423	25.1543
25.511	25.781	25.855	25.995	25.1183	25.1433	25.1545
25.561	25.783	25.856	25.997	25.1185	25.1435	25.1547
25.562	25.785	25.857	25.999	25.1187	25.1438	25.1549
25.563	25.787	25.858	25.1001	25.1189	25.1439	25.1551
25.631	25.789	25.865	25.1013	25.1191	25.1441	25.1557
25.651	25.791	25.867	25.1015	25.1193	25.1445	25.1561
25.655	25.793	25.871	25.1017	25.1195	25.1447	25.1563
25.657	25.795	25.903	25.1019	25.1197	25.1449	App A
25.677	25.801	25.933	25.1021	25.1199	25.1450	App B
25.679	25.803	25.934	25.1023	25.1201	25.1451	App D
25.681	25.805		25.1025	25.1203		App F
	25.807		25.1041	25.1207		App J

The 14 CFR part 26 paragraphs which are applicable to the modification are provided in the following table:

Part/Paragraph	Part/Paragraph	Part/Paragraph	Part/Paragraph
26.11	26.41	26.47	26.49

Special Conditions:	767-300-1 kit and 767-300F-1: See Type Certificate Data Sheet A1NM 767-300-2 kit and 767-300F-2: See Type Certificate Data Sheet A1NM and Interaction of Systems and Structure: Wing Aerodynamic Loads and Applied Factors of Safety for Manuevering Conditions with the Speed Brake Wing Load Alleviation System Failed.
Equivalent Safety	767-300-1 kit and 767-300F-1: See Type Certificate Data Sheet A1NM 767-300-2 kit and 767-300F-2: See Type Certificate Data Sheet A1NM and 25.1419: Use of Analysis and Findings and Wind Tunnel Testing to Demonstrate Safe Flight in

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Certification Basis (continued):

	Icing Conditions.
Exemptions:	See Type Certificate Data Sheet A1NM
Certification Maintenance Requirements and Airworthiness Limitations:	Airplane maintenance must be in accordance with the applicable Aviation Partners Boeing Maintenance Planning Document (MPD) Supplement Certification Maintenance Requirements and Airworthiness Limitations documents listed in the applicable Approved Model List (AML) document referenced above.
Required Equipment:	See Type Certificate Data Sheet A1NM
Service Information:	Refer to the applicable Aviation Partners Boeing Approved Model List (AML) document referenced above for the applicable Structural Repair Manual Supplement, Airplane Maintenance Manual Supplement, Maintenance Planning Data Document, and Fault Isolation Manual Supplement documents.
Previously Determined Compatible Supplemental Type Certificates (STC):	Refer to the applicable Aviation Partners Boeing Approved Model List (AML) document referenced above for notes identifying certain STC's that have already been determined to be compatible with this STC.
TCDS Notes:	All Notes in Type Certificate Data Sheet A1NM that apply to the 767-300/-300F Series also apply to an airplane operated in this configuration.
Optional Requirements:	All optional requirements in Type Certificate Data Sheet A1NM that apply to the 767-300/-300F Series also apply to an airplane operated in this configuration.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

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